Amendments to the Claims:

1. (currently amended) A method for synchronizing with a transmitted signal, said method comprising:

receiving said transmitted signal, wherein said signal comprises a periodic information bearing point at an information rate and wherein an information period is the inverse of said information rate;

sampling said signal at a sampling rate greater than said information rate;

down sampling from said sampling rate wherein more than N sample points are sampled per information period to a filtering rate of N sample points per information period prior to said step of filtering each of N sample points;

during a first predetermined number of information periods, filtering each of N sample points for each information bearing point with a pulse-shaping filter and outputting a filtered signal;

measuring a variable of said filtered signal at each of said N sample points, wherein said variable is independent of information content in said signal;

determining the location of said information bearing point in said signal based on said information content-independent variable;

identifying one of the N sample points that most closely corresponds to said information bearing point in said signal;

synchronizing processing of said signal with said information bearing point; and

during a second number of subsequent information periods, filtering a subset of the N sample points for each subsequent information period, the subset of the N sample points including the identified one of the N sample points;

2. (original) The method of claim 1 wherein the subset of N sample points consists of the identified one of the N sample points, and each adjacent sample point.

3. (original) The method of claim 1 wherein the subset of N sample points consists of the identified on of the N sample points and one proceeding and one subsequent sample point of the N sample points.

4. (canceled)

5. (original) The method of claim 1, wherein said information bearing point occurs between two of said sample points and further comprising, interpolating between sample points to determine the information bearing point during the first predetermined number of information periods; and interpolating between the subset of N sample points during the second number of subsequent information periods; tracking the results of the step of interpolating between the subset of N sample points; and updating the subset of N sample points in response to the tracking step.

6. (original) The method of claim 1 wherein the subset of N sample points is updated when the results of the interpolation step identifies the information bearing point as being more than halfway between two of the N sample points.

7. (original) The method of claim 1 wherein N equals thirteen sample points for each information bearing point.

8. (original) The method of claim 1 wherein said information bearing point corresponds to a quadrature amplitude modulated symbol.

9. (original) The method of claim 1, wherein said pulse-shaping filter meets Nyquist criteria.

10. (original) The method of claim 1 wherein said first predetermined number of information periods is 1320 periods.

11. (original) The method of claim 1 wherein said second number of information periods is 1320 periods.

12. (original) The method of claim 1 wherein the second number of information periods is variable.

13. (original) The method of claim 5 wherein the second number of information periods is determined from the frequency with which the updating step occurs.

14. (currently amended) A telecommunication receiver capable of synchronizing with a received signal, said receiver comprising:

an analog-to-digital converter receiving an information signal, wherein said signal comprises a periodic information bearing point at an information rate, and wherein an information period is the inverse of said information rate;

a pulse shaping filter coupled to receive a digital signal from said analog-to-digital converter and to receive a control signal from a synchronization unit, wherein said digital signal comprises N sample points per said information period, the pulse shaping filter configured to operate in a first mode in which each of N sample points per information period is filter and a second mode in which a subset of N sample points per information period is filtered; and

[[a]] said synchronization unit coupled to receive a pulse shaped sampled signal from said filter, said synchronization unit comprising

a detector determining values of a variable of said signal at said N sample points when said pulse shaping filter is operating in said first mode and of said subset of N sample points when said pulse shaping filter is operating in said second mode, wherein said variable is independent of information content in said signal;

an accumulator to accumulate said detected values for each of said sample points which occurs at the same relative sample location within each information period, wherein there are (sample rate)/(information rate) sample locations within each information period;

sample bins for storing said accumulated values for said sample locations; and

a comparator for comparing said accumulated values in said sample bins, wherein the location of said information bearing point in said signal is determined based on said accumulated information content-independent values;

an identifier for identifying the relative sample location most closely

corresponding to the information bearing point; and

a control signal generator for generating a control signal to said pulse shaping filter, the control signal including the identify of the identified relative sample location.

15. (original) The receiver of claim 14 wherein the pulse shaping filter further comprises: a down sampler receiving the digital signal from the analog-to-digital converter at a first sampling rate and outputting the digital signal at a second sampling rate, the second sampling rate being equivalent to N samples per information period.

16. (original) The receiver of claim 14 wherein the first sampling rate is 260 kHz and the second sampling rate is 52 kHz and N is equal to 13.

17. (original) The receiver of claim 14 wherein the pulse shaping filter and the synchronization unit are embodied as routines performed by a digital signal processor.

18. (original) The receiver of claim 14 wherein the subset of N sample points is the identified sample point corresponding to the identified relative sample location most closely corresponding to the information bearing point and one additional sample point on either side of the identified one relative sample location.

19. (original) The receiver of claim 18 wherein the additional sample point on either side of the identified sample point is the next adjacent sample point on either side of the

identified sample point.

20. (original) The receiver of claim 14 wherein the pulse shaping filter operates in the first mode during signal acquisition and operates in the second mode for a predetermined number of information periods subsequent to signal acquisition.